

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference K 61 863/7ch		FOR FURTHER ACTION	See Form PCT/IPEA/416																								
International application No. PCT/EP2004/006066	International filing date (day/month/year) 04.06.2004	Priority date (day/month/year) 12.06.2003																									
International Patent Classification (IPC) or national classification and IPC																											
Applicant GIESECKE & DEVRIENT GMBH																											
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 12 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <table><tr><td><input checked="" type="checkbox"/></td><td>Box No. I</td><td>Basis of the report</td></tr><tr><td><input type="checkbox"/></td><td>Box No. II</td><td>Priority</td></tr><tr><td><input type="checkbox"/></td><td>Box No. III</td><td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td></tr><tr><td><input type="checkbox"/></td><td>Box No. IV</td><td>Lack of unity of invention</td></tr><tr><td><input checked="" type="checkbox"/></td><td>Box No. V</td><td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VI</td><td>Certain documents cited</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VII</td><td>Certain defects in the international application</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VIII</td><td>Certain observations on the international application</td></tr></table>				<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand		Date of completion of this report																									
Name and mailing address of the IPEA/EP		Authorized officer																									
Facsimile No.		Telephone No.																									

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Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-3, 5-21 as originally filed/furnished
- pages* 4 received by this Authority on 09.08.2005 with letter of 09.08.2005
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-43 received by this Authority on 09.08.2005 with letter of 09.08.2005
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1/3-3/3 as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	3-14, 18-43	YES
	Claims	1-2, 15-17	NO
Inventive step (IS)	Claims		YES
	Claims	1-43	NO
Industrial applicability (IA)	Claims	1-43	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
1	This report makes reference to the following documents:		
	D1: EP-A-0 854 451 (GIESECKE & DEVRIENT GMBH) 22 July 1998 (1998-07-22)		
	D2: DE 39 00 056 A (NEDAP NV) 20 July 1989 (1989-07-20)		
	D3: WO 01/43082 A (OHYA TOITSU; FUJITA MASANOBU (JP); IZAWA HIKARU (JP); NIPPON KINSEN K) 14 June 2001 (2001-06-14)		
	D4: DE 101 49 265 A (GIESECKE & DEVRIENT GMBH) 17 April 2003 (2003-04-17)		
	D5: EP-A-1 182 048 (BANQUE DE FRANCE) 27 February 2002 (2002-02-27)		
2	INDEPENDENT CLAIM 1		
2.1	The present application does not meet the requirements of PCT Article 33(1) because the subject matter of the claim lacks novelty (PCT Article 33(2)).		
	Document D1 discloses (column 3, line 53 -		

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column 4, line 25) a value document (1) comprising a machine-readable authenticity mark (5). The authenticity mark comprises a first, luminescent, marking substance (4) and a second marking substance (5), which is not or is only slightly reflective or emissive in the wavelength range of the luminescent radiation of the marking substance (4).

The luminescent marking substance (4) is thus emissive in the absorption range of the absorbing marking substance (5).

The luminescent marking substance (4) is emissive in the visible or non-visible spectral range (column 4, lines 37-41), that is in the ultraviolet, visible or infrared ranges.

Document D1 therefore implicitly discloses an embodiment in which the luminescent marking substance (4) is emissive in the infrared wavelength range and the absorbing marking substance (5) is absorptive in the infrared wavelength range.

The subject matter of claim 1 differs from the value document in D1 by virtue of the wording alone and not by virtue of the technical teaching of its disclosure.

The optional features in claim 1 do not restrict the scope of protection.

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The subject matter of claim 1 thus lacks novelty.

- 2.2 Even if the selection of the infrared spectral range from the ultraviolet to the infrared spectral range were considered novel, to a person skilled in the art this would concern only one of several obvious possibilities from which a person skilled in the art would choose according to the circumstances in order to make the authenticity mark forgery-proof, without thereby being inventive.

The subject matter of claim 1 would therefore appear not to involve an inventive step (PCT Article 33(3)).

- 2.3 The present application does not meet the requirements of PCT Article 33(1) because the subject matter of the claim lacks novelty (PCT Article 33(2)). Document D2 discloses the subject matter of claim 1 (column 1, lines 1-17; column 2, lines 2-4, lines 34-39).

3 DEPENDENT CLAIM 2

- 3.1 The subject matter of claim 2 is disclosed in document D1; see point 2.1. The subject matter of claim 2 therefore lacks novelty (PCT Article 33(2)).

- 3.2 The subject matter of claim 2 is disclosed in document D2; see point 2.3. The subject matter of

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claim 2 therefore lacks novelty (PCT Article 33(2)).

4 DEPENDENT CLAIMS 3-9

The subject matter of claims 3 to 9 concerns the properties of the luminescent marking substance and of the infrared-absorbing marking substance. A person skilled in the art would select such substances from those available according to the circumstances and without thereby being inventive.

Documents D4 and D5 provide examples of such marking substances.

Document D5 discloses, for example, a marking substance that comprises a host lattice which is doped with rare earth metal, can be excited at 800 nm and emits at 1054 nm (column 8, § 59).

Document D4 discloses, for example, an infrared-absorbing marking substance that is colourless, shows no significant absorption at 800 nm and absorbs at more than 1000 nm (see the abstract).

Claims 3 to 9 therefore do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for inventive step (PCT Article 33(3)).

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5	DEPENDENT CLAIMS 15-17
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Document D1 indicates that the luminescent marking substance and the infrared-absorbing marking substance lie in mutually overlapping areas of the value document (column 4, lines 15 and 16).

Document D1 indicates that the arrangement of the infrared-absorbing marking substance represents coded information (column 4, lines 19-25).

Claims 15-17 therefore do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for inventive step (PCT Article 33(3)).

6	DEPENDENT CLAIMS 18-20
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The subject matter of claims 18-20 concerns a printed layer.

6.1 The use of a printed layer to cover an infrared-absorbing marking substance is common in the technical field concerned; see, for example, document D3 (page 7, line 29 - page 8, line 2), which uses a printed layer that is opaque in the visible spectral range and is transparent in the infrared spectral range.

Claims 18-19 therefore do not contain any features which, in combination with the features of any

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claim to which they refer, meet the PCT requirements for inventive step (PCT Article 33(3)).

- 6.2 The use of a plurality of absorbing marking substances that have different absorption properties is common in the technical field concerned; see, for example, document D4 (the abstract).

Consequently, the use of a printed layer which is opaque in the emission range of the luminescent marking substance is only one of several obvious possibilities from which a person skilled in the art would choose according to the circumstances in order to form an absorbing authenticity mark, without thereby being inventive. Claim 20 therefore does not contain any features which, in combination with the features of any claim to which it refers, meet the PCT requirements for inventive step (PCT Article 33(3)).

7 DEPENDENT CLAIMS 11-14, 21-23

Claims 11-14 and 21-23 concern details of implementation and do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for novelty (PCT Article 33(2)) and inventive step (PCT Article 33(3)).

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8	<p>INDEPENDENT CLAIMS 24, 27</p> <p>Claims 24 and 27 do not contain any features which meet the PCT requirements in respect of inventive step (PCT Article 33(3)).</p> <p>Claims 24 and 27 concern an authenticity mark which is contained in a security element and in a security paper, rather than in a value document as in claims 1 to 23.</p> <p>The objections raised against the authenticity mark as per claims 1 to 23 therefore also apply to claims 24 and 27.</p> <p>It is obvious to a person skilled in the art that the authenticity mark as per claims 1 to 23 can also be used in the alternative embodiments mentioned above.</p> <p>A person skilled in the art would select those embodiments without thereby being inventive.</p> <p>Consequently, the subject matter of claims 24 and 27 does not involve an inventive step.</p>
9	<p>DEPENDENT CLAIMS 25-26</p> <p>Claims 25-26 concern details of implementation and do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for novelty (PCT</p>

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	Article 33(2)) and inventive step (PCT Article 33(3)).
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10	INDEPENDENT CLAIMS 28, 32, 34
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Claims 28, 32 and 34 do not contain any features which meet the PCT requirements for inventive step (PCT Article 33(3)).

The subject matter of claims 28, 32 and 34 concerns a test method.

In order to develop a test method for testing the authenticity mark according to claims 1 to 24, a person skilled in the art would have to make use of the following steps:

- irradiation using infrared radiation in the absorbable wavelength or excitation wavelength;
- determining the reflected/emitted radiation and/or transmitted radiation;
- evaluating authenticity based on measurement.

A person skilled in the art would, according to the circumstances, select a suitable test method from these possibilities without thereby being inventive.

The subject matter of claims 28, 32 and 34 therefore fails to involve an inventive step.

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11	<p>DEPENDENT CLAIMS 29-31, 33, 35-39</p> <p>Claims 29-31, 33 and 35-39 concern details of implementation and do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for inventive step (PCT Article 33(3)).</p>
12	<p>INDEPENDENT CLAIMS 40-42</p> <p>The features of claims 40-42 match the features of claims 28-39, the former being expressed using device terminology and the latter using method terminology.</p> <p>The objections raised against claims 28-39 therefore also apply to claims 40-42.</p> <p>Claims 40-42 therefore do not contain any features which meet the PCT requirements for inventive step (PCT Article 33(3)).</p>
13	<p>INDEPENDENT CLAIM 43</p> <p>The subject matter of claim 43 concerns embodiments which contain the test device according to claims 40-42.</p> <p>A person skilled in the art would consider it common practice to use the test device in those embodiments in order to test value documents.</p>

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Claim 43 therefore fails to involve an inventive
step (PCT Article 33(3)).